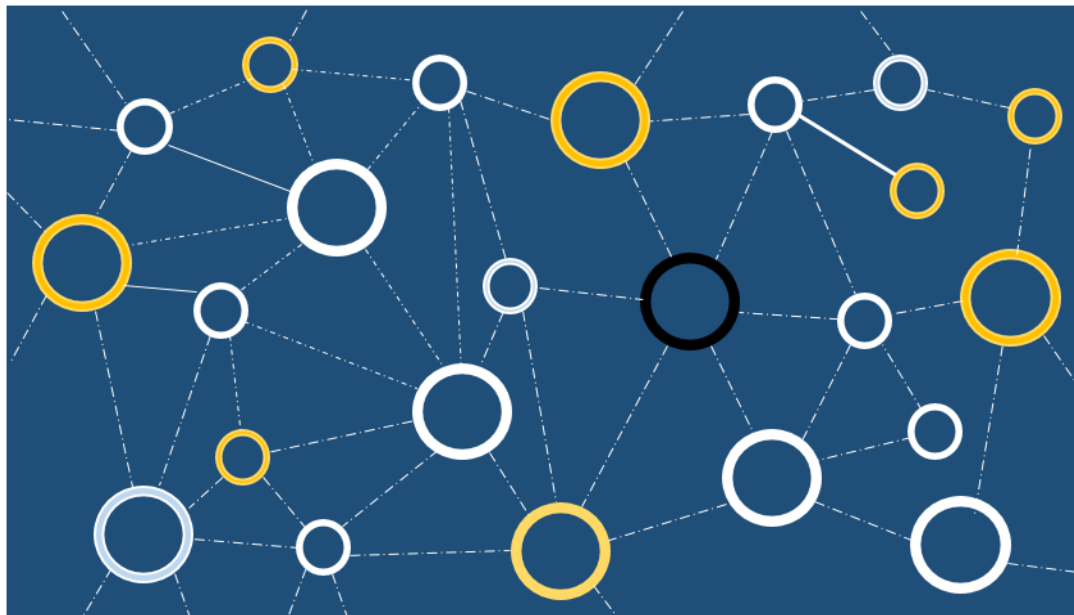




Australian Digital  
& Telecommunications  
Industry Association Inc.

**ADTIA RESOURCE**



# GUIDE TO CAREERS IN DIGITAL AND TELECOMMUNICATIONS INDUSTRY

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**JANUARY 2018**

VERSION 1

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## 1. INTRODUCTION

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This Guide has been developed by ADTIA with contributions from the ICT Industry, CITT and TITAB, to provide advice and links to tools and resources (see Glossary) which will:

- help a range of stakeholders, including enterprises and job seekers, to more clearly understand the job opportunities that are available in the telecommunications industry
- highlight the personal aptitudes and attributes required to successfully perform these roles.

This information will assist job seekers and those seeking a career change to accurately assess whether a telecommunications job is a career pathway that they could, and would, like to pursue and to identify what, if any, training they need to do to be competitive for these positions.

This Guide is provided free and builds on information available from many sources in the Public domain and includes:

- Industry background
- Identified career pathway models
- Identified career progression opportunities
- Identified core entry requirements
- Developed detailed job descriptions
- Proposed next steps for candidate opportunities

### Career Questions

Throughout this guide we have asked questions that will help you get the best value for your effort and ensure you get an understanding of the telecommunications industry.

**There are no 'correct' answers – just your personal response to each question.**

If you have any questions on Training for the Telecommunications Industry, you can contact an "RTO" (Registered Training Organisation e.g. TAFE) or ADTIA.

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### Career Question 1 – Why Cabling?

What event led you to be looking at a career in telecommunications?

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## 2. TELECOMMUNICATIONS INDUSTRY WORKFORCE BACKGROUND

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Australia's ICT sector contributes around five percent of Australia's GDP. It is a complex and comprehensive industry with revenues in the tens of billions; huge capital expenditure and investments in research and development at about \$6 billion. Accordingly the Australian ICT Industry has a critical place in the national economy. Telecommunication is a necessary part of the ICT as without it the Australian and world economy would grind to a halt.

Telecommunications is a multifaceted and tech-rich industry that is made up of an assortment of different communication forms. It includes voice, video, and Internet communications services.

The Australian Digital & Telecommunications Industry Association (ADTIA) is a member based industry association with an emphasis within the digital reception and telecommunications sectors on skilling its workforce to 'Future Proof' the industry by promoting:

- Quality and Standards
- Workforce Training and Skills development
- Industry growth and productivity
- Industry based Professional development
- Supporting its small business operators

ADTIA works closely with **industry** and its members to maximize exposure to **Knowledge, Opportunity and Growth** to ensure access to a well skilled workforce in an open collaborative environment.

ADTIA works closely with **Government** to implement workforce strategies to its technical workers with emphasis on occupational health and safety practices, customer service and how to operate a small business to meet the demands of the Digital Economy.

### Career Question 2 - ADTIA

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How could an industry organisation like ADTIA help you if you work in a small to medium telecommunications business such as a cabling, Digital Technology or hardware installation?

### 3. NATIONAL INDUSTRY OVERVIEW

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#### Industry profile

The telecommunications Industry is comprised of organisations engaged primarily in providing telecommunications services. It covers a number of areas including cabling, wireless, switching, transmission, RF and optical communications, media and IP networks.

Advances in digital and IP networking technologies have had a dramatic effect on the demand for better, faster and more bandwidth for ICT communications to serve the Australian economy and community.

These applications include:

- Broadband network installation
- Escalating use of social networking applications such as Facebook, Instagram and Twitter
- Smart homes and home integration technologies
- Increasing use of IP technologies such as VoIP, IPTV and smart phones
- The proliferation of home networks, home entertainment and smart home technologies
- Superior and more advanced broadband networks such as the NBN. These initiatives will boost the Australian economy through eHealth, eEducation, eTravel and hospitality
- New approaches to media distribution through the internet
- The switchover to the new digital economy

#### Career Question 3 - Technologies

---

Select three information technologies you use regularly and understand reasonably well. Outline how you could build a career on your knowledge of these.

- 1
- 2
- 3

## Looking into the Future

One of the major Australian Government initiatives for the telecommunications industry is the National Broadband Network (NBN). This represents one of the largest ever infrastructure project undertaken in this country which will deliver high speed broadband to all Australians. The NBN involves the use of multi technology mix to Australian homes, schools and businesses, capable of delivering speeds faster than many people experience today.

Another major telecommunications initiative was the switching over to digital television. As broadcasting is one of the most powerful ways of delivering information, entertainment and education the government is taking an active role in enhancing the quality and diversity of television and radio broadcasting services for all Australians. The switch to digital television has freed up scarce spectrum, which new communications services such as high-speed wireless broadband use.

### Career Question 4 – The NBN

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We are all familiar with the general principals of the NBN – Fibre to the Premises (FTTP), Fibre to the Curb (FTTC) and so forth. If you're uncertain simply look at the NBN website. How many ways could you contribute to the NBN as it is being built, how it is being maintained and how it is used by the public and businesses on a daily basis?

How many ways could you build a career based on the NBN? Can you list three?

1

2

3

## 4. INDUSTRY STAKEHOLDERS

---

There are many stakeholder groups including investors, consumers, enterprises (large and small business and organisations), workforce and equipment suppliers and communities.

### Industry sector/tiers and companies

The telecommunications industry can be identified by these sectors with each having critical skills that the workforce requires new or updating skills through VET programs:

- Telecommunications carriers network planning, development and infrastructure – including National Broadband Network rollout programs
- Cabling/data communications – Customer Access Network (CAN) and Customer Premises Equipment (CPE)
- Digital sector – Digital Reception of Free to Air (FTA), subscription/cable TV
- Broadcasting and satellites
- Computer and telephony integration
- Radio communication
- Home integration systems – in telephony, security, audio-visual, television and computers

Based on their size and on their market competencies, providers of telecommunications services can be broken into three tiers of telecom carriers:

#### Tier 1: Full service providers

Tier 1 providers run their own national and international network. Examples include Telstra, Optus, and Vodafone. They all have their own managed IP networks terminating in all capital cities within Australia, their own private capacity to international locations (America etc) and it's all run in house.

#### Tier 2: Internet providers through partial peering

Tier 2 providers are the most common telecom carriers on the internet. Tier 2 providers buy their internet service from a tier 1 ISP, known as peering. Tier 2 ISPs tend to cover a specific region. They focus on business customers and have lower quality networks and slower access than tier 1 ISPs.

#### Tier 3: Internet providers with niche specialisation

Tier 3 ISPs also purchase their Internet service from tier 1 ISPs. Tier 3 ISPs tend to focus on the retail market, and they also tend to cover a specific region. Network quality and access speed are relatively low. Prices are much lower than for tier 2 or tier 1 ISPs..



## Contracting or employment - who do you want to work for?

### Career Question    Your response

Each stakeholder engages workers who build the Australian telecommunications network.

Tier 1 Providers run their own national and international network.

*Any reasonable response*

Being employed or contracted by each type of company has benefits for the individual employee or contractor – that means you and for the company.

Think about this, ask current employees or contractors, and look at other sources of information on the internet.

Tier 2 Providers are the most common telecom carriers on the internet.

These are providers with niche specialisations.

*Any reasonable response*

What is/are the advantages of being employed or contracted by each type of company?

Tier 3 ISPs also purchase their Internet services from tier 1 ISPs.

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## 5. CONVERGENCE

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Coverage occurs when technology across a number of industries blend into one technology. For instance – the traditional telephone, computer technology and digital media. Voice, data and video applications are increasingly being delivered over a single integrated or ‘converged’ network carrier platform in both the fixed and mobile environments.

### Convergence and Employment

The trend towards convergence in telecommunications offers another level of employment – technicians work on customer systems to integrate technologies such as digital TV, online video, audio and other services.

A separate range of training and service delivery systems has been emerging for a decade or more.

### Career Question 5 – Convergence at Home

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*Case study:*

***Kim moved into the new apartment on the weekend but by Monday Kim had given up trying to install the new sound system and TV. Kim could have one or the other but not both.***

***Technologies merge and diverge continuously both at home and in the wider world. ‘This is nothing like my old system Kim explained to a friend who had some ‘tech savvy’. By Monday afternoon they gave in and called the supplier for advice. On Tuesday the system was working like a charm after a visit from an electrician.***

***The TV and the sound both relied on the other to work correctly. The sound system also needed a separate power source to operate.*** Think of two employment opportunities that could arise from this situation.

What training would the supplier or the ‘tech savvy’ friend do to take advantage of this situation?

## 6. TELECOMMUNICATIONS SKILLS

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### Emerging skills

The NBN final mix of technologies and architecture will have a significant effect on its workforce skills and training needs. As well as skills in construction, civil engineering, electrical and customer services will also need to be addressed. This mix of technologies should include a multi-technology solution and will require thousands of enterprise employees and contractors to be trained in skills that will provide part or full certification in ICT.

### Skills convergence

The industry has expanded to cover the convergence of technologies across a number of industry areas, including communications, IT and digital media. Whereas in the past a particular skill was required to undertake a task, today workers are expected to have all skills.

### Skill shortages

The telecommunications industry provides critical infrastructure requirements in the economy, and has the potential to have much broader implications than for the particular industry faced with a shortage.

The NBN final mix of technologies and architecture is having a significant effect on its workforce skills. Many of the 'traditional' skills for cable jointing, remedial work, testing and fault finding on copper are in greater demand. Contracting and privatisation arrangements in recent years has left a gap for mid and higher level technical skills which for a time was mainly filled with ex-carrier redundant staff who have since retired.

Construction of the NBN alone is driving demand for skilled workers including line workers, splicers, cable jointers, labourers and earthmoving plant operators. Providing a suitably qualified and skilled workforce to construct it ensures quality of the network, timely achievement of milestones and the effective mitigation of risk.

### Career Question 6 – The Long Term

What is this information telling us about long term employment prospects for workers? Think about where the future lies for Australian workers. What skills are missing in the skill sets of local employees? What opportunities are there for potential engineers, technicians and other hands-on roles. What training do you need for telecommunications in the future?

## **7. WHAT LICENSING AND REGULATORY REQUIREMENTS APPLY?**

The Australian Communications and Media Authority (ACMA) is the government regulator responsible for regulating telecommunications (including cabling), radio communications and broadcasting in Australia.

The ACMA has the power to regulate cabling work that is intended to be connected to the telecommunications network. In October 2000, the ACMA developed the Cabling Provider Rules (CPRs). The CPRs are based on an industry-run registration scheme and are designed to promote industry self regulation in line with government policy.

Under the CPR, all cabling work undertaken must comply with legislative requirements and standards such as the Wiring Rules and the Labelling Notice. The CPR mandates that all cabling work must be performed by a registered cabler.

### **What are the Wiring Rules?**

AS/ACIF S009:2013 – Installation requirements for customers cabling (Wiring Rules) is a joint Standards Australia/Australian Communications Industry Forum (ACIF) Standard. Compliance with AS/ACIF S009:2013 is mandated by the Cabling Provider Rules.

The AS/ACIF S009:2013 defines the minimum mandatory requirements for the installation or maintenance of cabling product (including cable) that is connected or intended to be connected to a telecommunications network.

### **What is the Labelling Notice?**

The Labelling Notice outlines the requirements for labelling cabling product and customer equipment.

These requirements outline the:

- Type of carrier service
- Applicable technical standards
- Form the label should take
- Requirements that must be taken before labelling an item with the ACMA A-Tick compliance label

### **Career Question 7 – Codes and Regulations**

From the information given above write a simple list of codes and regulations that a cabler or installer would use in their work – look it up on the internet.

## 8. CABLER REGISTRATION

The CPRs mandate that all cabling work must be performed by a registered cabler. ACMA accredits industry bodies to act as registrars for the cabling industry. Under CPRs, a cabler must register with one of these registrars to undertake cabling work.

There are three types of registration – open, restricted and lift. The registration type which is required depends on the type of work which is being carried out.

**Open cabling work** covers all types of residential and commercial cabling work. It includes cabling that terminates directly on a socket, network termination device (NTD) or distributors. To perform this work, you will need an OPEN registration.

**Restricted cabling work**, as the name implies, covers a restricted range of residential and small business work. Examples include:

- Cabling work connected behind an alarm panel or modem
- Cabling work connected directly behind a customer switching system but NOT via a jumperable distributor or frame
- Cabling work for additional phone points

To perform this work, you will need a RESTRICTED registration.

**Lift cabling work** includes telecommunications cabling for lift installation. To be able to perform work in this category you will require a LIFT registration.

### Career Question 8 – Which Cabling

You have a choice between Open Registration and Restricted Registration. Read the notes and consider the type of cabling you plan to do – large scale, small scale or lift cabling. Select one and give a short explanation for your decision.

**Your response:**

---

To obtain a cabler registration, applicants must demonstrate that they meet a range of cabling competencies specified by the ACMA. Each registration type (open, restricted and lift) has prescribed cabling competencies that apply. In most cases these competencies are achieved by undertaking a range of training with a Registered Training Organisation (RTO).

After cablers have met the relevant competency requirements for the type of cabling registration selected, they can then apply for the cabling registration from an ACMA-accredited registrar.

There are five registrars accredited by the ACMA to manage the cabling registration system. Cablers are free to choose any of the five registrars to register with. All five registrars offer nationwide coverage and all offer Open, Restricted and Lift registration types. Each registrar can advise a cabler about how to register and the relevant registration fees that apply.

Job roles encompass a diverging ICT Industry

There are many branches in the telecommunications industry.

The small 'mind map' shown here identifies just a few.

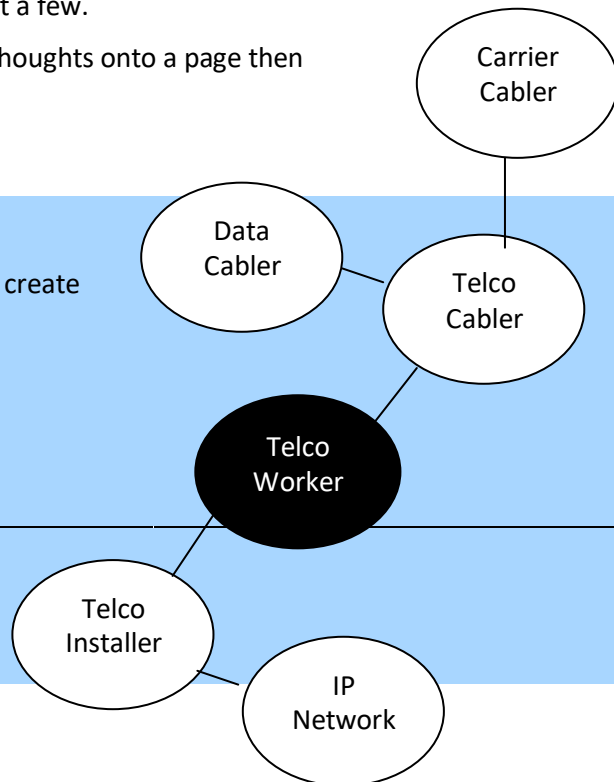
The purpose of a mind-map is to 'dump' your thoughts onto a page then put them into a logical order.

### Career Question – Mind Map

Using the lists provided – installer and cabler – create a mind map of potential career pathways on a separate page

### Your response

On a separate page



### INSTALLER

Equipment installer

IP based network installer

SME business network installer

Subscription TV installer

Security alarm cabler/ installer

Digital TV installer

Subscription TV installer

Satellite TV installer

Free to air TV installer

### CABLER

Telecommunications equipment operator

Telecommunications tradesperson

Data cabler


Carrier services cabler

Infrastructure cabler

Telecommunications access network cabler

The work roles on the following page can be added into your mind map as long as you have some understanding what they do.

Draw your mind map here. See Mind Map employment ideas on the next page.



Telco  
Worker

## 9. ADDITIONAL WORK ROLES

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The list below includes a range of employment positions in the telecommunications sector. These can be used when answering the preceding questions or when considering what employment positions to apply for.

1. Telecommunications network equipment installer
2. IP based security alarms installer
3. Telecommunications equipment operator
4. Telecommunications tradesperson
5. Audiovisual systems integrator
6. Field service technician-RF services
7. Free to air TV installers-multiple services
8. Subscription TV installer-multiple services
9. Broadband installer
10. Optical broadband installer
11. Wireless broadband network installer
12. Broadband network infrastructure installer
13. Access network cabling installer
14. Installer of telecommunications aerial cable access network
15. Installer of telecommunications underground cable access network
16. Customer computer system installer
17. Customer premises equipment installer
18. Home network installer
19. IP based installer
20. Network security equipment installer
21. Optical network equipment installer
22. Radio technician
23. RFID system installer
24. Secure IT network installer
25. SME network installer
26. Sustainability network equipment installer
27. Telecommunications network technician
28. Wireless LAN installer
29. Wireless network equipment installer
30. Access network planner
31. Telecommunications technician planner
32. Installer of emerging technologies
33. IP based network installer
34. Specialised network infrastructure installer
35. Secure IT network installer

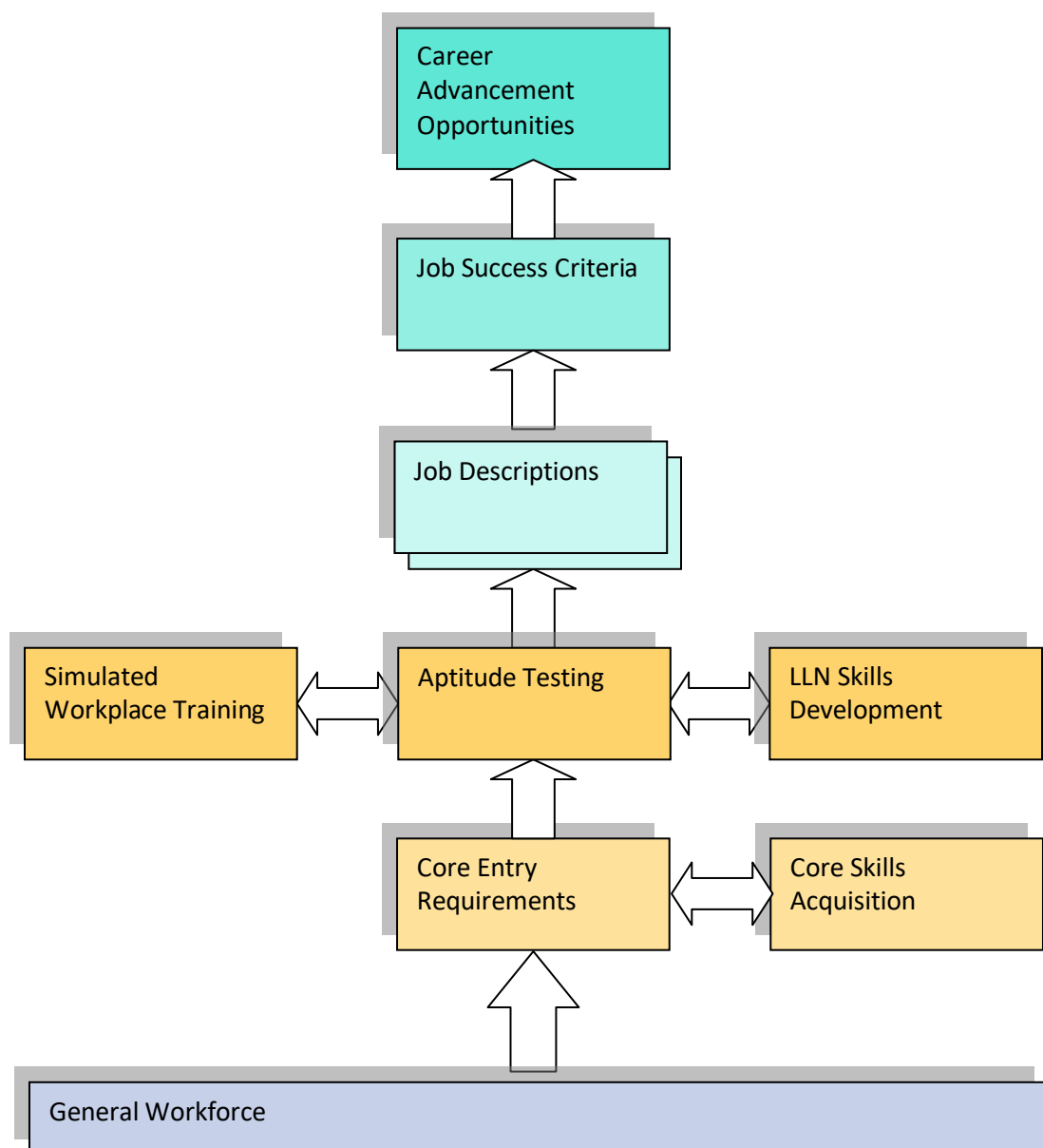


## 10. CAREER PATHWAYS MODEL

### Structured Career Progress

The model shown below identifies and recognises the steps or elements of the pathway from general job seekers to telecommunications occupations. It is proposed as a conceptual model in which each component can be satisfied in a variety of ways depending upon the individual participant's circumstances.

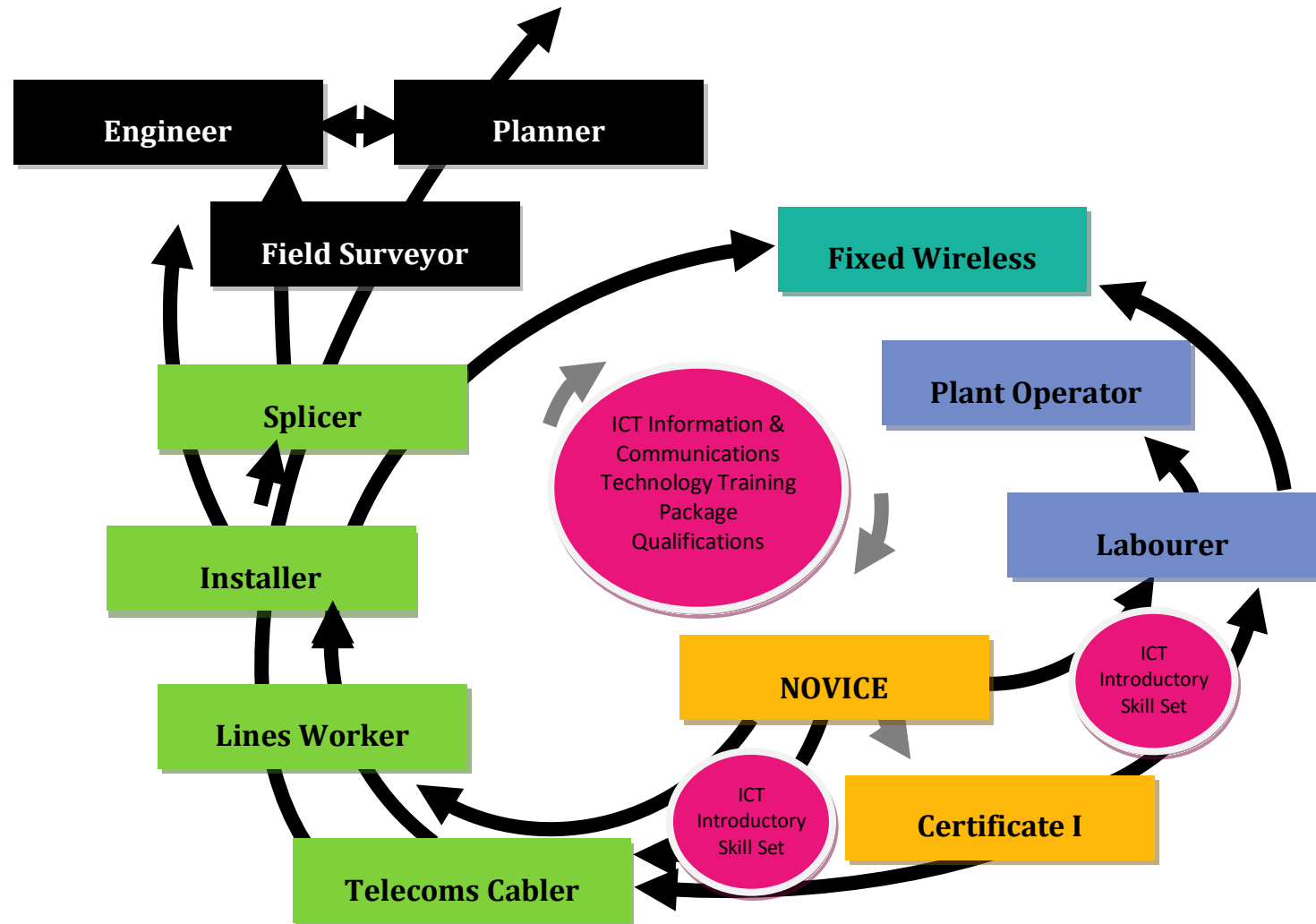
A trained telecommunications worker with industry experience may skip forward to the aptitude test and job descriptions. A novice may need to engage in some form of intervention at each step.



## Page 17

To achieve the best – or most stimulating career path an employee may need to change pathways from time to time using training and education as the driver of that change.

As we said earlier – there is no ‘correct answer’ only a series of, hopefully, interesting jobs within a larger organisation.



## 11. CORE SKILLS FOR TELECOMMUNICATIONS

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This set of identified set of skills and attributes is for candidates wanting to enter the telecommunications workforce. They are based on the demands of the work both intellectually and physically. For core entry requirements for a specific role the Job Description should be considered in the first instance.

This list should not exclude any individual from entry to the industry but it may be used as a guide to intending employees to help them make their own judgement about their suitability to work on the NBN construction or the Telecommunications work within customer premises. Potential applicants should also be aware that employers may require workers to undergo, a drug and alcohol check, medical check, police check and working with children check.

### Self-Assessment Checklist

Identify and tick off skills.

#### Technical

- Comprehension
- Ability to read and write so as to write work orders and understand instructions
- Ability to detect spelling mistakes in documents
- Basic Maths and equations
- Need to be able to multiply, add, subtract and divide
- Scientific Notation
- Understand use of symbols/ notations such as  $\sqrt{}$ ,  $\Sigma$ ,  $2^2$ ,  $\frac{3}{4}$ .
- Conversion of weights and measures
- Ability to source and understand metric conversions
- Mechanical acumen - ability
- Knowledge and ability to use hand and power tools.

#### Self

- Enjoy working outdoors
- Normal eyesight, colour vision and physical fitness
- Good hand-eye coordination
- Able to work at heights and in confined spaces
- Time Management and issues around punctuality for

## **Self-Assessment Checklist**

customers and business

- Ability to work harmoniously with peers and supervisors
- Problem solving
- Resourcefulness in obtaining information and equipment.

## **Public and Team**

- Understanding and willingness to adhere to WH&S policies and practices
- Ability to take direction from supervisors and clients.
- Ability to work harmoniously with peers and supervisors
- Ability to work on own
- Interest in working on end user / customer premises

## **Work Environment**

- Knowledge of underground infrastructure build and things such as power, water, gas and telecommunications.
- Understanding of internal premises and architecture.

## **Personal Requirements**

- enjoy practical work
- normal eyesight, colour vision and physical fitness
- good hand-eye coordination
- safety conscious
- able to work at heights and in confined spaces
- good communication skills

## **Career Question 9 – Lining Up**

Compare your checklist skills with one of the roles in the pages that follow.

Which Job Title have you chosen?

## **12. JOB TITLE: TELECOMMUNICATIONS CABLER**

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### ***PURPOSE OF THE POSITION***

This role is for workers who install telecommunications and data cabling and cabling products on customer premises. The role requires workers to apply a broad range of telecommunications competencies in varying installation scenarios.

### ***SUITABLE FOR APPLICANTS WHO:***

1. Are comfortable with working in confined spaces
2. Can work at heights
3. Are great team players
4. Enjoy working indoors
5. Are not affected by colour blindness
6. Enjoy end user / customer interface
7. Are willing to undergo drug and alcohol testing
8. Will be required to undertake a police check

---

### ***PRIMARY TASKS***

Primary tasks are highly likely to form part of the day to day activities of the worker.

- Task 1 – Install cabling at the customer premises in accordance with requirements of the Australian Communications and Media Authority (ACMA)
- Task 2 – Work on specialised cabling for the broadband network.
- Task 3 – Install and operate telecommunications customer equipment, customer products and test equipment
- Task 4 – Determine cable routes, taking into account building services, safety, industry codes and practices, and customer requirements

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### ***SECONDARY TASKS***

- Task 1 – Install Digital Reception equipment

Note: Secondary tasks may form part of a person's job role depending on the construction site and composition of the crew.

These lists of tasks are not definitive but provide an indication of the type of work that may be involved.

## ***ACADEMIC & TRADES QUALIFICATIONS***

Essential	Desirable
ICTCBL236A Install, maintain and modify customer premises communications cabling: ACMA Restricted Rule	ICT20315 Certificate II in Telecommunications Technology
ICTWHS204 Follow OHS and environmental policy and procedures	ICT30515 Certificate III in Telecommunications Technology
	ICTCBL237A Install, maintain and modify customer premises communications cabling: ACMA Open Rule

## ***WORK EXPERIENCE & SKILLS***

Essential	Desirable
Telecommunications work experience	Working with customers on their premises
Work with broadband technologies	Minimum 80 hrs telecommunications experience

## ***ABILITIES & ATTRIBUTES***

Technical	Self
<ol style="list-style-type: none"> <li>1. Communication               <ol style="list-style-type: none"> <li>a. Ability to read and write so as to write work orders and understand instructions</li> <li>b. Good oral communication skills</li> <li>c. Will need to be able to communicate technical concepts in simple terms to customers</li> </ol> </li> </ol>	<ol style="list-style-type: none"> <li>1. Enjoy working indoors</li> </ol>
<ol style="list-style-type: none"> <li>2. Basic maths and algebra               <ol style="list-style-type: none"> <li>a. Need to be able to multiply, add, subtract</li> </ol> </li> </ol>	<ol style="list-style-type: none"> <li>2. Normal eyesight, colour vision and physical fitness</li> </ol>

<ul style="list-style-type: none"> <li>and divide</li> <li>b. Solve equations</li> <li>c. Ability to calculate distances and measurements</li> </ul>	
3. Scientific Notation <ul style="list-style-type: none"> <li>a. Understand use of symbols/ notations such as <math>\sqrt{}</math>, <math>\Sigma</math>, <math>2^2</math>, <math>\frac{3}{4}</math>.</li> <li>b. Solve equations involving scientific notation</li> </ul>	3. Good hand-eye coordination
4. Conversion of weights and measures - including metric conversions (e.g. Kilometres to metres)	4. Resourcefulness in obtaining information and equipment
5. Mechanical acumen	5. Able to work at heights and in confined spaces
6. Knowledge and ability to use hand and power tools	6. Time management skills and issues around punctuality for customers and self
	7. Problem solving

Public and Team	Work Environment
1. Understanding and willingness to adhere to workplace health and safety policies and practices	1. Knowledge of underground infrastructure build and things such as Power, water, Gas and telecommunications
2. Ability to work harmoniously with peers and supervisors	2. Understanding of internal premises and architecture
3. Able to take direction from supervisors and clients	3. Working inside customer premises, requires the maintenance of a clean work environment
4. Ability to work on own	
5. Interest in working on end user / customer premises	
6. Flexible and willing to consider customer requirements/preferences	

## **13. JOB TITLE: FIXED WIRELESS RIGGER**

### ***PURPOSE OF THE POSITION***

Works in a specialised area of installation of telecommunication equipment, this can be on high structures including radio towers or for installation and connection of wireless base stations. Uses rigging skills to install and maintain radio antennas on radio towers and build and mount sections of radio masts for a complete radio structure

### ***SUITABLE FOR APPLICANTS WHO:***

1. Enjoy working at heights
2. Are great team players
3. Love working outdoors
4. Are not affected by colour blindness
5. Willing to undergo drug and alcohol testing

---

### ***PRIMARY TASKS***

Primary tasks are highly likely to form part of the day to day activities of the worker.

- Task 1 – Install Fixed Wireless Base Station
- Task 2 – Install Tele Equipment on High Structures
- Task 3 – Traffic Management

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### ***ACADEMIC & TRADES QUALIFICATIONS***

Essential	Desirable
ICT30315 - Certificate III in Telecommunications Rigging Installation	
Construction Industry White Card	

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### ***WORK EXPERIENCE & SKILLS***

Essential	Desirable
Recognised skills in working at heights	
Engineering experience – especially in telecommunication installation	

### ***ABILITIES & ATTRIBUTES***



Technical	Self
<ol style="list-style-type: none"> <li>1. Communication <ol style="list-style-type: none"> <li>a. Ability to read and write so as to write work orders and understand instructions</li> <li>b. Good oral communication skills</li> </ol> </li> </ol>	<ol style="list-style-type: none"> <li>1. Enjoy working outdoors and at heights</li> </ol>
<ol style="list-style-type: none"> <li>2. Basic maths and algebra <ol style="list-style-type: none"> <li>a. Need to be able to multiply, add, subtract and divide</li> <li>b. Solve equations</li> <li>c. Ability to calculate distances and measurements</li> </ol> </li> </ol>	<ol style="list-style-type: none"> <li>2. Normal eyesight, colour vision and physical fitness</li> </ol>
<ol style="list-style-type: none"> <li>3. Scientific Notation <ol style="list-style-type: none"> <li>c. Understand use of symbols/ notations such as <math>\sqrt{}</math>, <math>\Sigma</math>, <math>2^2</math>, <math>\frac{3}{4}</math>.</li> <li>d. Solve equations involving scientific notation</li> </ol> </li> </ol>	<ol style="list-style-type: none"> <li>3. Good hand-eye coordination</li> </ol>
<ol style="list-style-type: none"> <li>4. Conversion of weights and measures - including metric conversions (e.g. Kilometres to metres)</li> </ol>	<ol style="list-style-type: none"> <li>4. Resourcefulness in obtaining information and equipment</li> </ol>
<ol style="list-style-type: none"> <li>5. Mechanical acumen</li> </ol>	<ol style="list-style-type: none"> <li>6. Able to work at heights and in confined spaces</li> </ol>
<ol style="list-style-type: none"> <li>6. Knowledge and ability to use hand and power tools</li> </ol>	<ol style="list-style-type: none"> <li>7. Time management skills and issues around punctuality for customers and self</li> </ol>
	<ol style="list-style-type: none"> <li>8. Problem solving</li> </ol>

Public and Team	Work Environment
<ol style="list-style-type: none"> <li>1. Understanding and willingness to adhere to workplace health and safety policies and practices</li> </ol>	<ol style="list-style-type: none"> <li>1. Knowledge of underground infrastructure build and things such as Power, water, Gas and telecommunications</li> </ol>
<ol style="list-style-type: none"> <li>2. Ability to work harmoniously with peers and supervisors</li> </ol>	<ol style="list-style-type: none"> <li>2. Safety harnesses</li> </ol>
<ol style="list-style-type: none"> <li>3. Problem solving</li> </ol>	<ol style="list-style-type: none"> <li>3. Working with hoists cranes</li> </ol>
<ol style="list-style-type: none"> <li>4. Able to take direction from supervisors and clients</li> </ol>	

## **14. JOB TITLE: FIBRE SPLICER**

### ***PURPOSE OF THE POSITION***

This role is for workers in applying optical fibre handling skills to splice, terminate and test optical fibre cable while applying safety precautions when working with laser -based systems in the fibre distribution network for NBN.

### ***SUITABLE FOR APPLICANTS WHO:***

1. Are comfortable with working in confined spaces
2. Love working outdoors
3. Are not affected by colour blindness
4. Willing to undergo drug and alcohol testing

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### ***PRIMARY TASKS***

Primary tasks are highly likely to form part of the day to day activities of the worker.

- Task 1 – Splice Fibre
- Task 2 – Test Fibre and Enclosures

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### ***SECONDARY TASKS***

- Task 1 – Install FDH: Cabinet and Splitters
- Task 2 –Traffic Control

Note: Secondary tasks may form part of a person's job role depending on the construction site and composition of the crew.

These lists of tasks are not definitive but provide an indication of the type of work that may be involved.

## ***ACADEMIC & TRADES QUALIFICATIONS***

Essential	Desirable
Construction Industry White card	ICT30415 Certificate III in Telecommunications Network Build and Operate
NBN Co accreditations e.g. Safety and Awareness Training	Installing enclosures (enclosures house the fibre)
Current drivers' licence	
ICT10 NBN Splicer Skill Set ??	

## ***WORK EXPERIENCE & SKILLS***

Essential	Desirable
General cabling experience	Ribbon splicing
Single fibre splicing	Installing enclosures

## ***ABILITIES & ATTRIBUTES***

Technical	Self
<ol style="list-style-type: none"> <li>1. Communication               <ol style="list-style-type: none"> <li>a. Ability to read and write so as to write work orders and understand instructions</li> <li>b. Good oral communication skills</li> </ol> </li> </ol>	<ol style="list-style-type: none"> <li>1. Enjoy working outdoors</li> </ol>
<ol style="list-style-type: none"> <li>2. Basic maths and algebra               <ol style="list-style-type: none"> <li>d. Need to be able to multiply, add, subtract and divide</li> <li>e. Solve equations</li> <li>f. Ability to calculate distances and measurements.</li> </ol> </li> </ol>	<ol style="list-style-type: none"> <li>2. Normal eyesight, colour vision and physical fitness</li> </ol>
<ol style="list-style-type: none"> <li>3. Conversion of weights and measures - including metric conversions (eg. Kilometres to meters)</li> </ol>	<ol style="list-style-type: none"> <li>3. Good hand-eye coordination</li> </ol>

4. Mechanical acumen	4. Resourcefulness in obtaining information and equipment
	5. Time management skills and issues around punctuality for customers and self
	6. Attention to detail
	7. Problem solving

Public and Team	Work Environment
1. Understanding and willingness to adhere to workplace health and safety policies and practices	1. Knowledge of underground infrastructure build and things such as Power, water, Gas and telecommunications
2. Ability to work harmoniously with peers and supervisors	2. Set up street work environment to support van and self with awareness of public safety requirements
3. Ability to identify and resolve errors detected during optical fibre testing	
4. Able to take direction from supervisors and clients	
5. Ability to work on own	

## 15. JOB TITLE: TRADES ASSISTANT

### PURPOSE OF THE POSITION

This position undertakes general labouring work associated with construction and/ or maintenance activities, including the digging of pits and trenches within which to install fibre optic cable and reinstatement after civil works.

Also support telecommunications lines-workers to install fibre optic.

### SUITABLE FOR APPLICANTS WHO:

1. Are comfortable with working in confined spaces
2. Are great team players
3. Love working outdoors
4. Are not affected by colour blindness

### PRIMARY TASKS

Primary tasks are highly likely to form part of the day to day activities of the worker.

- Task 1 – Undertake a range of civil tasks at a construction site
- Task 2 – Install concrete base for cabinets
- Task 3 – Install Pits
- Task 4 – Undertake Traffic Management

### SECONDARY TASKS

- Task 1 – Install Underground Service Drop
- Task 2 – Install FDH: Cabinet:
- Task 3 – Install Pipes: Directional Drilling
- Task 4 – Install Pipes: Trenching
- Task 5 – Assist Field Survey
- Task 6 – Make Ready Works: Underground: Rod & Rope

Note: Secondary tasks may form part of a person's job role depending on the construction site and composition of the crew.

These lists of tasks are not definitive but provide an indication of the type of work that may be involved.

### ACADEMIC & TRADES QUALIFICATIONS

Essential	Desirable
Construction Industry 'White Card'	Training in use of hand and power tools
NBN Co accreditations e.g. Safety and Awareness Training	Traffic management

### WORK EXPERIENCE & SKILLS

Essential	Desirable
Current valid manual driver's licence	Construction experience

	Assisting with surveys
	Assisting with cable hauling

### ***ABILITIES & ATTRIBUTES***

Technical	Self
1. Basic maths and algebra a. Need to be able to multiply, add subtract and divide	1. Communication a. Ability to read and write so as to write work orders and understand instructions b. Good oral and writing skills
2. Basic conversion of weights and measures - including metric conversions (e.g. kilometres to metres)	2. Normal eyesight, colour vision and physical fitness
3. Knowledge and ability to use hand and power tools	3. Good hand-eye coordination
	4. Resourcefulness in obtaining information and equipment
	5. Able to work at heights and in confined spaces
	6. Time management skills and issues around punctuality for customers and self
	7. Problem solving
Public and Team	Work Environment
1. Ability to work harmoniously with peers and supervisors	1. Knowledge of underground infrastructure build and things such as Power, water, Gas and telecommunications
2. Able to take direction from supervisors and clients	2. Understanding and willingness to adhere to Workplace Health & Safety policies and practices
3. Ability to communicate with general public and premises occupants	

## 16. APPENDIX

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### Information Sources

There are a wide range of online sources of information about the Telecommunications Industry and opportunities for job seekers. The following is a list of well recognised sources, usually with a link to federal or state and territory government organisations.

- The Australian Apprenticeships & Traineeships Information Service – [www.aapathways.com.au](http://www.aapathways.com.au)  
This website provides apprenticeships and traineeships information and resources for Australian Apprenticeships Centres, Registered Training Organisations, Group Training Organisations, Job Services Australia providers and other service providers and stakeholders including:
  - Aptitude Quizzes,
  - Training Programs
  - Career Resources,
  - Apprenticeship and Trainee information.
- Group Training Organisations [www.grouptraining.com.au](http://www.grouptraining.com.au)  
Group Training Australia, a national leader in vocational education and training will work with its member group training organisations (GTOs) to promote and enhance the business of group training and deliver successful employment and training outcomes.  
  
Site includes information to find a GTO.
- Job Services Australia [www.jobsearch.gov.au/](http://www.jobsearch.gov.au/)  
Job Services Australia (JSA) providers work with eligible job seekers to develop an individually tailored Employment Pathway Plan. The plan maps out the training, work experience and additional assistance needed to find job seekers. sustainable employment.
- National Electrical and Communications Association [www.neca.asn.au](http://www.neca.asn.au)  
NECA provides members and electrical contractors; with technical advice, products advice on employment and apprenticeship.
- National Broadband Network Corporation - [www.nbnco.com.au](http://www.nbnco.com.au)  
NBN Co is building Australia's first high-speed national broadband network for all Australians.
- /corporate-information/careers.html  
This site is an information source for the NBN – when, how much, etc  
  
In the Start Your Career with NBN web page, there are links to NBN Co delivery partner websites that provide opportunities for employment.
- Communications Alliance - [www.commsalliance.com.au](http://www.commsalliance.com.au)  
Communications Alliance was formed to promote the growth of the Australian communications industry and provide a unified voice.

- Department of Communications and the Arts -  
<https://www.communications.gov.au/>  
The department provides advice about the communications industry—television, radio, Internet, phone, post, and the changes in digital technologies. DCA undertakes analysis, provides advice and develops and delivers programmes so Australians can enjoy the benefits of modern communications.
- Australian Communications and Media Authority -  
[www.acma.gov.au](http://www.acma.gov.au)  
This site is an information source for the ACMA – its powers and responsibilities.  
No job seeker jobs.
- [https://www.youtube.com/results?search\\_query=telecommunications+technician](https://www.youtube.com/results?search_query=telecommunications+technician)  
YouTube telecommunications videos.
- [www.titab.com.au](http://www.titab.com.au)  
TITAB, one of four cabler registrars
- [www.citt.com.au](http://www.citt.com.au)  
CITT a not for profit consultancy focusing on telecommunications.

All websites listed have been checked and found working as at 10<sup>th</sup> January 2018



## Applying for a cabler registration

After an individual has met the relevant competency requirements for the type of cabling registrations they select, they can apply for a cabling registration from an ACMA accredited registrar.

There are five national registrars to choose from:

### Australian Cabler Registration Service (ACRS)

Tel: 1300 667 771

Fax: 02 9744 3928

Email: [enquiries@acrs.com.au](mailto:enquiries@acrs.com.au)

Website: [www.acrs.com.au](http://www.acrs.com.au)

### Australian Security Industry Association Limited (ASAIL)

Tel: 02 8425 4331

Fax: 02 8425 4343

Email: [cabling@asial.com.au](mailto:cabling@asial.com.au)

Website: [www.asial.com.au](http://www.asial.com.au)

### BICSI Registered Cablers Australia Pty Ltd (BRCA)

Tel: 1800 306 444

Fax: 03 9867 5099

Email: [info@brca.com.au](mailto:info@brca.com.au)

Website: [www.brca.com.au](http://www.brca.com.au)

### Fire Protection Association Australia (FPA Australia)

Tel: 03 8892 3131

Fax: 03 8892 3132

Email: [cpr@fpaa.com.au](mailto:cpr@fpaa.com.au)

Website: [www.fpaa.com.au](http://www.fpaa.com.au)

### TITAB Australia Cabler Registry Services (TITAB ACRS)

Tel: 03 9631 0800

Fax: 03 9650 0485

Email: [info@titab.com.au](mailto:info@titab.com.au)

Website: [www.titab.com.au](http://www.titab.com.au)

## Telecommunications and Training Glossary

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<http://www.titab.com.au/faqs/glossary>

The Telecommunications Industry Association (TIA) provides an open access online glossary at:

<http://www.tiaonline.org/resources/telecom-glossary> This glossary is far more comprehensive than any glossary that could be provided in this report. We have reproduced an edited version of it here, which is not intended to be prescriptive.

The NBN Co provides a very comprehensive online glossary at:

<https://www.nbnco.com.au/content/dam/nbnco/documents/glossary.pdf>

**Access and Equity:** Policies and approaches aimed at ensuring vocational education and training is responsive to the individual needs of clients whose age, gender, cultural or ethnic background, disability, sexuality, language, literacy or numeracy level, unemployment, imprisonment or remote location may present a barrier to access, participation and the achievement of suitable outcomes.

**Analog:** Is a type of signal which works by transmitting sounds and pictures as a continuous wave. Analog technology is out of date and is being replaced worldwide by digital.

**Accreditation:** The formal recognition of a course by the state or territory course accrediting body

**Apprenticeship:** A system of training regulated by law or custom which combines on-the-job training and work experience while in paid employment with formal off-the-job training. The apprentice enters into a contract of training or training agreement with an employer, which imposes mutual obligations on both parties. Traditionally, apprenticeships were in trade occupations (declared vocations) and were of four years' duration.

**Assessment:** The process of collecting evidence and making judgements about whether a person has the required knowledge and has achieved an appropriate level of competency in order to confirm the person can perform to the standard expected in the workplace, as specified by the relevant industry or enterprise competency standards provided in a Training Package or by the learning outcomes of an accredited course.

**Assessment Guidelines:** The endorsed component of a Training Package that underpins assessment and sets out the industry approach to valid, reliable, flexible and fair assessment.

**Assessment Materials:** Optional component of Training Packages that complement endorsed industry assessment guidelines and could take the form of assessment exemplars or specific assessment tasks and instructions.

**Assessment Tools:** The instrument(s) and procedures used to gather and interpret evidence of competence:

- a) Instrument – the specific questions or activity used to assess competence by the assessment method selected. An assessment instrument may be supported by a profile of acceptable performance and the decision-making rules or guidelines to be used by assessors.
- b) Procedures – the information or instructions given to the candidate and the assessor about the way the assessment is to be conducted and recorded.

**Assessor:** A person qualified to carry out assessments.

**Australian Communications and Media Authority (ACMA):** The Australian Communications and Media Authority is the independent statutory authority tasked with ensuring most elements of Australia's media and communications legislation, related regulations, and numerous derived standards and codes of practice operate effectively and efficiently, and in the public interest.

The ACMA is also a 'converged' regulator, created to bring together the threads of the evolving communications universe, specifically in the Australian context the convergence of the four 'worlds' of telecommunications, broadcasting, radiocommunications and the internet. The ACMA was formed on 1 July 2005 by a merger of the responsibilities of the Australian Broadcasting Authority and the Australian Communications Authority. It was created, at least in part, to respond to the observed and anticipated changes brought about by this convergence and is one of only a handful of converged communications regulators in the world.

**Australian Digital and Telecommunications Industry Association (ADTIA):** The ADTIA was established as an industry association to promote best practice within the digital television sector by way of training and quality assurance.

**Australian Industry Group (AIG):** An independent body created by the merger of the Metal Trades Industry Association of Australia and the Australian Chamber of Manufactures, representing about 11,500 companies.

**Australian Qualifications Framework (AQF):** The policy framework that defines all qualifications recognised nationally in post-compulsory education and training in Australia. The AQF comprises titles and guidelines that define each qualification, as well as the principles and protocols covering cross-sectoral qualification linkages and the issuing of qualifications and statements of attainment.

**Australian Quality Training Framework (AQTF):** The nationally agreed quality arrangements for the VET system agreed to by the National Quality Council and approved by all the states and territories at the Ministerial Council for Vocational and Technical Education. The AQTF (2007) comprises:

- a) Essential Standards for Registration.
- b) Criteria for recognition of excellence.

**Australian Skills Quality Authority (ASQA):** National regulator for Australia's VET sector

**Australian Vocational Education and Training Management Information Statistical Standard (AVETMISS):** The agreed national data standard for the collection, analysis and reporting of vocational education and training information in Australia.

**Communications Advisory Group (CAG):** Made up of industry representatives, including the regulator, that meet to discuss issues of common concerns such as technical standards for Australia.

**CITT: Industry:** Delivers strategic analysis and advice for the Information Technology and Telecommunications sectors. This includes technical and call centre training, and analysis and commentary on industry skills matters. CITT also promote Training Packages, Apprenticeships and Traineeships within these sectors.

**Cadetship:** An employment arrangement in which an employer undertakes to subsidise an employee's formal training leading to industry qualifications.

**Communications Alliance:** Industry body responsible for developing standards, codes of practice and service specifications.

**Competency:** (also competence): The ability to perform tasks and duties to the standard expected in employment.

**Competency-based Assessment (CBA):** The gathering and judging of evidence in order to decide whether a person has achieved a standard of competence.

**Competency-based Training (CBT):** Training which develops the skills, knowledge and attitudes required to achieve competency standards.

**Competency Standard:** An industry-determined specification of performance, which sets out the skills, knowledge and attitudes, required to operate effectively in employment. Competency standards are made up of units of competency, which are themselves made up of elements of competency, together with performance criteria, a range of variables, and an evidence guide. Competency standards are an endorsed component of a training package.

**Contextualisation:** The addition of industry or enterprise specific information to a unit of competency to improve the standards relevance to industry.

**Credit Transfer (CT):** A process that assesses how the formal learning program; learning outcomes and assessments of an initial course (i.e. the "course" and the knowledge and skills gained by completing it) relate to the learning requirements of another course.

**Customisation:** Tailoring to individual requirements, (in vocational education and training) the process of tailoring a program to meet the specific needs of clients. Customised qualifications can be created by Registered Training Organisations, through combining competency standards to create a new qualification outcome.

**Department of Communications and the Arts (DCA):** Provides advice about the communications industry—television, radio, Internet, phone, post, and the changes in digital technologies. DCA undertakes analysis, provides advice and develops and delivers programmes so Australians can enjoy the benefits of modern communications.

**Digital Switchover:** Is the point at which the analog signal was switched off in a region and replaced by digital signals only.

**E-Telit:** Email newsletter sent by TITAB

**Evidence Guide:** The part of a competency standard which provides a guide to the interpretation and assessment of the unit of competency, including the aspects which need to be emphasised in assessment, relationships to other units, and the required evidence of competency.

**Fee-For-Service Training:** Training for which most or all of the cost is borne by the student or a person or organisation on behalf of the student.

**FTTH:** Fibre-to-the-Home

**FTTN:** Fibre-to-the-Node

**FTTP:** Fibre-to-the-Premises (both home and business)

**FTTC:** Fibre-to-the-Curb (both home and business)

**Flexible Delivery:** A range of approaches to providing education and training, giving learners greater choice of when, where and how they learn. Flexible delivery may involve distance education, mixed-mode delivery, online education, self-paced learning, self-directed learning, etc.

**Full High Definition (FHD):** Is an enhancement of digital TV which refers to the highest quality pictures available. It is sometimes shown as 1080i or 1080p, which refers to screen resolution.

**Group Training Company (GTC):** A company which employs apprentices and trainees, and places them with one or more host employers who are usually small to medium-sized businesses. The host employers provide on-the-job training and experience, while the group training company organises off-the-job training, and handles recruitment, rotation and payroll.

**High Definition (HD):** Is an enhancement of Digital TV which refers to the quality of picture. High Definition is sometimes shown as 720p, which refers to screen resolution.

**HFC (Hybrid Fibre Coaxial):** is a network technology developed by the cable TV industry that allows two-way, high-speed broadband content (video, voice and data) to be delivered to the home using a combination of fibre and coaxial cable.

**HTML:** Hypertext Mark-Up Language

**HTTP:** Hyper Text Transfer Protocol

**Integrated Digital Television (iDTV):** Is a television with an in-built digital tuner for receiving free to air digital television transmissions.

**National Broadband Network (NBN):** The nbn™ broadband access network is one of the most advanced technology projects in Australian history. Will deliver superfast broadband to Australian homes and workplaces and enhance broadband services for remote areas and Indigenous communities.

**National Centre for Vocational Education Research (NCVER):** A national research, evaluation and information organisation for the vocational education and training (VET) sector in Australia, jointly owned by the Australian Government, state and territory ministers responsible for vocational education and training.

**Recognition Of Current Competencies (RCC):** Applies if a person has previously successfully completed the requirements for a unit of competency or module and is now required (for example, by a licensing authority) to be reassessed to ensure that the competence is being maintained. In this case no extra skills or competencies are nationally recognised. An unsuccessful recognition of current competency assessment does not invalidate the previous competent assessment outcome.

**Recognition of Prior Learning (RPL):** An assessment process that assesses a person's non-formal and informal learning (regardless of how, when or where the learning occurred) to determine the extent to which the person has already achieved the required learning outcomes or competency standards of an AQF qualification. RPL may be used by a person to obtain entry to a qualification, or full or partial completion of a qualification. The decision to recognise prior learning must be made by a suitably qualified assessor who determines:

- a) the appropriate evidence required to support a claim for RPL, and
- b) the extent to which the person's informal and non-formal learning is equivalent to the learning outcomes and performance criteria of the qualification into which the person is seeking entry or for which they are seeking credit.

**Registered Training Organisation (RTO):** A training organisation registered by a state or territory registering body in accordance with the Essential Standards for Registration and Conditions of Registration, within a defined scope of registration. Includes TAFE colleges and institutes, adult and community education providers, private providers, community organisations, schools, higher education institutions, commercial and enterprise training providers, industry bodies and other organisations meeting the registration requirements.

**Scope Of Registration:** The particular services and products an RTO is registered to provide. The RTO's scope defines the specific AQF qualifications, units of competency and accredited courses it is registered to provide and whether it is registered to provide:

- a) both training delivery and assessment services, and to issue the relevant AQF qualifications and statements of attainment, or
- b) only assessment services, and to issue AQF qualifications and statements of attainment.

**Set top box (STB):** Is a device which allows an analog TV to receive and show digital content.

**Standards Australia (SA):** Is charged by the Commonwealth Government to meet Australia's need for contemporary, internationally aligned Standards and related services.

**Standards for NVR Registered Training Organisations 2011:** The standards that guide RTO's into a nationally consistent, high-quality training and assessment service in the VET system

**Statement of Attainment (SOA):** Formal certification in the VET sector by an RTO that a person has achieved:

- a) part of an AQF qualification, or
- b) one or more units of competency from a nationally endorsed Training Package, or

- c) all the units of competency or modules comprising an accredited short course (i.e. an accredited course that does not meet the requirements for a full AQF qualification).

**State Training Authority (STA):** Also called state/territory training authority the body in each state or territory responsible for the operation of the vocational education and training system within that jurisdiction. Each state or territory training authority participates in the formulation of national policy, planning and objectives, and promotes and implements the agreed policies and priorities within the state or territory.

**TELIT:** Hardcopy newsletter produced by TITAB twice a year.

**Telecommunications Cabling Advice (TCA1) form:** Cablers must complete this form at the completion of each cabling task.

**Telecommunications Cabling Advice (TCA2) form:** This form enables cablers to alert the customer of any non-compliant cable installations outside of the contracted scope of work

**TITAB:** ACMA accredited registrar, set up to provide the telecommunications industry with its own non-profit registry service.

**Training.gov:** Training.gov.au is the National Register on Vocational Education and Training (VET) in Australia. Training.gov.au is the authoritative source of:

1. Nationally Recognised Training (NRT) which consists of:
  - Training Packages
  - Qualifications
  - Units of competency
  - Accredited courses
  - Skill sets
2. Registered Training Organisations (RTOs) who have the approved scope to deliver Nationally Recognised Training, as required by national and jurisdictional legislation within Australia.

**Trainee:** A person receiving training or undertaking a traineeship. See also Australian Apprenticeships

**Traineeship:** A system of vocational training combining off-the-job training at an approved training provider with on-the-job training and practical work experience. Traineeships generally take one to two years and are now a part of the Australian Apprenticeships system.

**VET in Schools:** Allows school students to combine vocational studies with their general education curriculum. Students participating in VET in Schools continue to work towards their secondary school certificate. The VET component of their studies gives them credit towards a nationally recognised



VET qualification. In this way, participants can keep their options open to pursue further full-time or part-time vocational training or to move into tertiary studies after school.

**VET Quality Framework:** Is a set of standards and conditions that ASQA uses to assess whether an RTO meets the requirements for registration. The Standards for NVR Registered Training Organisations 2011 are just 1 of 5 components that make up the VET Quality Framework.

**VoIP: Voice over Internet Protocol**

**Vocational Education and Training (VET):** Post-compulsory education and training, excluding degree and higher level programs delivered by higher education institutions, which provides people with occupational or work-related knowledge and skills. VET also includes programs, which provide the basis for subsequent vocational programs.

## 17. TELECOMMUNICATIONS ACRONYMS

Workers in the telecommunications sector are prone to use a lot of 'TLA's or three letter acronyms. Here is a list of commonly used acronyms in use. A glossary can take a number of forms, the simplest being a list of acronyms.

**ACMA** – Australian Communications and Media Authority  
**ATA** – Analogue Terminal Adapter  
**AIS** – Alarm Indication Signal  
**CBL** – Control Blocked  
**CLI** – Caller Line Identity  
**CND** – Calling Number Display  
**CPE** – Customer Premise Equipment  
**CSG** – Customer Service Guarantee  
**CT** – Communications Technician (Telstra Tech)  
**DID** – Direct Inward Dial  
**DLU** – Digital Line Unit  
**DSL** – Digital Subscriber Line  
**EBD** – Exchange Based Diversion  
**ECF** – Enhanced Callhandling Feature  
**ETR** – Estimated Time of Resolution  
**F2M** – Fixed to Mobile  
**FNN** – Full National Number  
**FR** – Frame Relay  
**GDN** – Group Directory Number  
**GMT** – Greenwich Mean Time  
**GDP** – Gross Domestic Product  
**HFC** – Hybrid Fiber Co-axial  
**ICT** – Information and Communications Technology  
**IP** – Internet Protocol  
**IDF** – Intermediate Distribution Frame  
**INMS** – Industry Number Management Services  
**IP** – Internet Protocol  
**ISDN** – Integrated Services Digital Network  
**ISP** – Internet Service Provider  
**IPND** – Integrated Public Number Directory  
**ITFS** – International Toll Free Service  
**IVR** – Interactive Voice Response/Recording  
**LAN** – Local Area Network  
**LCR** – Least Cost Routing  
**LHG** – Line Hunt Group  
**LMDS** – Local Multipoint Distribution System  
**LNP** – Local Number Portability  
  
**LOS** – Loss of Signal (or line of sight, with regard to wireless links)  
**MDF** – Main Distribution Frame  
**NBP** – Network Boundary Point  
**NOC** – Network Operations Centre

**NT1** – Network Terminating Unit  
**NTD** – Network Terminating Device  
**NTU** – Network Terminating Unit  
**OATS** – Telstra's diagnostic test, aka RVOP  
**P2P** – Peer to Peer  
**PABX** – Private Automatic Branch Exchange  
**PGS** – Pair Gain Systems  
**POI** – Point of Interconnect  
**POP** – Point Of Presence  
**POTS** – Plain Old Telephone System  
**PRA** – Primary Rate Access  
**PRI** – Primary Rate Interface  
**PSTN** – Public Switched Telephone Network  
**PVC** – Permanent Virtual Circuit  
**QOS** – Quality of Service  
**RIM** – Remote Integrated Multiplexer  
**RVA** – Recorded Voice Announcement  
**RVOP** – Telstra's diagnostic test, also called OATS  
**SDH** – Synchronous Digital Hierarchy  
**SHDSL** – Symmetrical Hierarchy Digital Subscriber Line  
**SLA** – Service Level Agreement  
**RF** – Radio Frequency  
**ULL** – Unconditioned or Unbundled Local Loop  
**TDR** – Time Domain Reflectometer  
**TIO** – Telecommunications Industry Ombudsman  
**USO** – Universal Service Obligation  
**UTC** – Universal Time Co-ordinated  
**VLAN** – Virtual Local Area Network  
**VMM** – Voice Mail Message  
**VOIP** – Voice Over Internet Protocol  
**VPN** – Virtual Private Network  
**WAN** – Wide Area Network

## **SUGGESTED RESPONSES TO CAREER QUESTIONS**

### **CQ 1 – (WHY CABLING)**

Cabling can be a career start opportunity to many occupations within the ICT and Digital Industry.

### **CQ2 - (ADTIA)**

1. Communication with other technicians
2. Support when needed
3. Sales of hardware and software

### **CQ3 – (TECHNOLOGIES)**

1. TV – installing complex systems
2. Wireless network – installing systems at home or work
3. Cabling – hardware installation

### **CQ4 - (NBN)**

1. Cabling Installing hardware
2. Training users
3. Maintaining networks+

### **CQ5 - (CONVERGENCE AT HOME)**

1. Training for small to medium networks

### **CQ 6 - (THE LONG TERM)**

An ability to adapt to a changing work environment

### **CQ 7 – (CODES AND REGULATIONS)**

ISO3001 – international standard for cabling

AS/ACIF S009:2013

Telecommunications Cabling Provider Rules 2014

- Restricted Registration ICTCBL236
- Open Registration ICTCBL237

Specialised Competencies

- Optical fibre ICTCBL3010
- Co-axial ICTCBL3011
- Structured cable ICTCBL3009
- Underground ICTCBL3018 and ICTCBL3019
- Aerial ICTCBL3020 and ICTCBL3021
- Specialised broadband cabling (Restricted Cabler Registration) ICTCMP2239

Telecommunications (Labelling Notice for Customer Equipment and Customer Cabling) Instrument 2015

## **CQ 8 – (WHICH CABLING)**

### **Restricted cabling work**

1. Cabling work connected behind an alarm panel or modem (but not via a jumperable distributor, a jumperable frame or a patch panel).
2. Cabling work connected directly behind a Customer Switching System (but not via a jumperable distributor, a jumperable frame or a patch panel).
3. Cabling work for additional phone points (other than the first point) in a commercial, high rise or multi-storey building, if the service involved is a standard telephone service (but not via a jumperable distributor, a jumperable frame or a patch panel).
4. Cabling work for a home automation system (but not via a jumperable distributor, a jumperable frame or a patch panel).

### **Lift cabling work**

Lift cabling work is defined in the Cabling Provider Rules as work:

- (a) that is performed in relation to a lift that has been installed, or is to be installed; and
- (b) in relation to which the customer cabling that is used connects:
  - i. a cross connection point adjacent to the lift motor room; and
  - ii. the lift control cubicle within the lift motor room; and
  - iii. the lift cars.

### **Open cabling work**

*Open cabling work* is any type of customer cabling work (including structured, coaxial, optical fibre cabling, aerial and underground cabling work on private or public property) in which the customer cabling that is used terminates at the network boundary on a socket, a network termination device or a MDF (main distribution frame).

## **CQ 9 – (LINING UP)**

- TELECOMMUNICATIONS CABLER
- FIXED WIRELESS RIGGER
- FIBRE SPLICER
- TRADES ASSISTANT